

CLAIMS

1. (Currently Amended) An optical ~~path~~ device, ~~installed in an optical device, and the optical path device comprising:~~

~~a light source, used to provide the optical path device an incident light;~~

a reflection unit, ~~used to reflect the incident light from a light source, wherein the reflection unit comprises an imaging mirror, an optical path turning mirror, and a parallel mirror set including a first reflection mirror and a second reflection mirror, a third reflection mirror, and a fourth reflection mirror~~ the parallel mirror set positioned to reflect the incident light from the light source to the optical path turning mirror, the optical path turning mirror positioned to reflect the incident light back to the parallel mirror set, wherein the incident light from the optical turning mirror is received by the parallel mirror set with the first reflection mirror and is reflected between the first reflection mirror and the second reflection mirror; and

a lens, ~~used to focus the incident light reflected by the reflection unit to form images, wherein the imaging mirror is positioned to reflect the incident light to the lens, an optical path of the incident light provided by the light source is in sequence: the light source the parallel mirror set the third reflection mirror the parallel mirror set the fourth reflection mirror the lens.~~

2. (Canceled)

3. (Canceled)

4. (Currently Amended) The optical ~~path~~ device according to claim 1, wherein the optical device is an optical scanner.

5. (Currently Amended) The optical ~~path~~ device according to claim 4, wherein the optical device further comprises an original document surface used to deposit a document desired to be scanned, and the original document surface is parallel to the parallel mirror set.

6. (Currently Amended) The optical ~~path~~ device according to claim 5, wherein the incident light provided by the light source is projected to the original document surface first, and then reflected to the parallel mirror set.

7. (Currently Amended) The optical ~~path~~ device according to claim 6, wherein between the incident light and the original document surface, there is an incident angle greater than 0 degree.

8. (Currently Amended) The optical ~~path~~ device according to claim 7, wherein when the incident angle decreases, the reflection number of the incident light reflected between the parallel mirror set increases.

9. (Currently Amended) The optical ~~path~~ device according to claim 1, wherein between the ~~third reflection~~ optical path turning mirror and a parallel surface of the parallel mirror set, there is an included angle between 0 degree and 180 degrees, and when the included angle decreases, the reflection number of the incident light reflected between the parallel mirror set increases.

10. (Currently Amended) The optical ~~path~~ device according to claim 1, wherein between the first reflection mirror and the second reflection mirror, there is a predetermined distance, and when the predetermined distance decreases, the reflection number of the incident light reflected between the parallel mirror set increases.

11. (Currently Amended) An optical ~~path~~ device, ~~installed in an optical scanner, wherein the optical scanner comprises an original document surface used to deposit a document desired to be scanned, and the optical path device comprising:~~

a light source, ~~used to provide an incident light projected to the a document desired to be scanned deposited on the an original document surface;~~

a reflection unit, ~~used to reflect the incident light reflected from the original document surface, wherein the reflection unit comprises an imaging mirror, an optical path turning mirror, and a parallel mirror set including a first reflection mirror and a second reflection mirror, a third reflection mirror, and a fourth reflection mirror, and the parallel mirror set is parallel to the original document surface;~~

a lens, ~~used to focus the incident light reflected by the reflection unit to form an imaging signal; and~~

a charge coupled device (CCD), ~~used an image sensor to covert convert the imaging signal produced by the lens into an electronic signal, wherein, the reflection unit is configured to provide an optical path of for the incident light provided by from the light source to the lens, wherein the optical path comprises, is in sequence, the light source-the parallel mirror set-the third reflection optical path turning mirror-the parallel mirror set-the fourth reflection imaging~~

mirror-the lens, wherein the incident light received by the parallel mirror set from the optical turning mirror is reflected between the first reflection mirror and the second reflection mirror.

12. (Canceled)

13. (Canceled)

14. (Currently Amended) The optical ~~path~~ device according to claim 11, wherein between the incident light and the original document surface, there is an incident angle greater than 0 degree, and when the incident angle decreases, the reflection number of the incident light reflected between the parallel mirror set increases.

15. (Currently Amended) The optical ~~path~~ device according to claim 11, wherein between the ~~third-reflection~~ optical path turning mirror and a parallel surface of the parallel mirror set, there is an included angle between 0 degree and 180 degrees, and when the included angle decreases, the reflection number of the incident light reflected between the parallel mirror set increases.

16. (Currently Amended) The optical ~~path~~ device according to claim 11, wherein between the first reflection mirror and the second reflection mirror, there is a predetermined distance, and when the predetermined distance decreases, the reflection number of the incident light reflected between the parallel mirror set increases.

17. (Currently Amended) The optical path device according to claim 11, wherein the parallel mirror set is parallel to the original document surface.

18. (New) A device comprising:

a parallel mirror set to receive light from a light source, the parallel mirror set including a first reflection mirror and a second reflection mirror;

an optical path turning mirror to receive the light from the parallel mirror set and to reflect the light back to the first reflection mirror of the parallel mirror set, where the light received from the optical path turning mirror is reflected between the first reflection mirror and the second reflection mirror; and

an imaging mirror to receive the light from the first reflection mirror of the parallel mirror set and to reflect the light to a image sensing device.

19. (New) The device according to claim 18, wherein the light from the light source is reflected from a document to the imaging mirror.

20. (New) The device according to claim 18, wherein a number of light reflections between the first reflection mirror and the second reflection mirror corresponds to an angle the light approaches the parallel mirror set from the light source.

21. (New) The device according to claim 18, wherein a number of light reflections between the first reflection mirror and the second reflection mirror corresponds to an angle between the optical path turning mirror and a parallel surface of the parallel mirror set.

22. (New) The device according to claim 18, wherein a number of light reflections between the first reflection mirror and the second reflection mirror corresponds to a distance between the first reflection mirror and the second reflection mirror.

23. (New) The optical path device according to claim 1, wherein a number of reflections of the incident light between the first reflection mirror and the second reflection mirror corresponds to at least one of an angle the incident light approaches the parallel mirror set from the light source, an angle of optical path turning mirror relative to the parallel mirror set, or a predetermined distance between the first reflection mirror and the second reflection mirror.

24. (New) The optical path device according to claim 1, wherein the parallel mirror set receives the incident light from the light source with the first reflection mirror, reflects the incident light to the optical path turning mirror with the first reflection mirror, receives the incident light back from the optical path turning mirror with the first reflection mirror, and reflects the incident light to the imaging mirror with the first reflection mirror.

25. (New) The optical path device according to claim 1, wherein the first reflection mirror of the parallel mirror set positioned to reflect the incident light from the optical path turning mirror to the imaging mirror.

26. (New) The optical path device according to claim 11, wherein a number of reflections of the incident light between the first reflection mirror and the second reflection

mirror corresponds to at least one of an angle the incident light approaches the parallel mirror set from the light source, an angle of optical path turning mirror relative to the parallel mirror set, or a predetermined distance between the first reflection mirror and the second reflection mirror.

27. (New) The optical path device according to claim 11, wherein the parallel mirror set receives the incident light from the light source with the first reflection mirror, reflects the incident light to the optical path turning mirror with the first reflection mirror, receives the incident light back from the optical path turning mirror with the first reflection mirror, and reflects the incident light to the imaging mirror with the first reflection mirror.